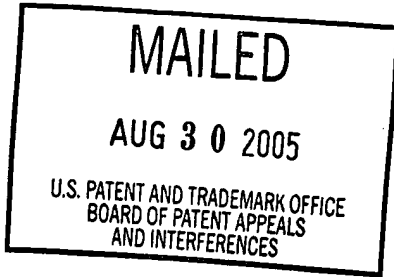


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES



Ex parte PETER KA-FAI CHOW

Appeal No. 2005-1966
Application No. 09/816,706

ON BRIEF

Before GROSS, BARRY, and BLANKENSHIP, Administrative Patent Judges.

BLANKENSHIP, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 and 3-12.

We reverse.

BACKGROUND

The invention relates to a home phone line network that uses Ethernet protocols. An Ethernet frame on the network may contain an 8-byte Limited Automatic Repeat Request (LARQ) header for, inter alia, increasing the speed of frame retransmission. A problem existed in Ethernet controllers failing to recognize a wake up bit pattern due to presence of the LARQ header. Appellant's invention is directed to stripping the LARQ header to support remote wake up. (Spec. at 1-3.) Representative claim 1 is reproduced below.

1. A method for supporting sleep mode wake up in a home phone line network, comprising the steps of:
 - (a) detecting a limited automatic repeat request (LARQ) header in a frame;
 - (b) stripping the LARQ header and a frame check sequence (FCS) in the frame;
 - (c) recalculating the FCS for the stripped frame; and
 - (d) adding the recalculated FCS to the stripped frame.

The examiner relies on the following references:

Hinchey et al. (Hinchey)	5,999,541	Dec. 7, 1999
Mallory	US 6,335,933 B1	Jan. 1, 2002 (filed May 21, 1999)
Gibson et al. (Gibson)	WO 96/13106	May 2, 1996

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Claims 1, 3, and 5-8 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hinchey and Mallory.

Claims 4 and 9-12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hinchey, Mallory, and Gibson.

The examiner has withdrawn a rejection of claim 2, which is now objected to as being dependent on a rejected base claim.

We refer to the Final Rejection (mailed May 13, 2004) and the Examiner's Answer (mailed Jul. 23, 2004) for a statement of the examiner's position and to the Brief (filed Jun. 21, 2004) and the Reply Brief (filed Aug. 30, 2004) for appellant's position with respect to the claims which stand rejected.

OPINION

We cannot sustain the § 103 rejections because, in our view, the provided prior art fails to show suggestion, motivation, or teaching for the combination that is contemplated by the rejections. In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention. Karsten Mfg. Corp. v. Cleveland Golf Co., 242 F.3d 1376, 1385, 58 USPQ2d 1286, 1293 (Fed. Cir. 2001).

Hinchey relates to rearranging information in a packet from a Token Ring network into a "tunneled" packet suitable for transfer in an Ethernet network. The examiner is correct that Hinchey discloses detecting a field in a frame, stripping the field and an FCS, recalculating the FCS for the stripped frame, and adding the recalculated FCS to the stripped frame. The examiner is also correct that Mallory discloses, in an Ethernet network, modifying a conventional Ethernet frame by adding a LARQ header.

However, the rejection applied against independent claims 1 and 5 concludes, based on these findings, that it would have been obvious "to have the field be an LARQ header in order to convert an Ethernet frame into an LARQ Ethernet frame and vice versa." (Answer at 4.) It is not clear why converting an Ethernet frame into a LARQ Ethernet frame might be applicable, as the claims require stripping, and not adding, a LARQ header to a frame. In any event, the conclusion takes the form of asserting what the references demonstrate could have been done.

The references may show that the artisan could have, for example, performed the steps of instant claim 1 with no more than ordinary skill in the art. The present inquiry, however, requires a different standard to show prima facie obviousness. Particular findings must be made with respect to why the skilled artisan, with no knowledge of the claimed invention, would have selected components for combination

in the manner claimed. In re Kotzab, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

As appellant notes, Hinchey relates to data transmission over different types of networks; specifically, transmitting Token Ring packets through an Ethernet network (e.g., col. 1, ll. 1-27). Mallory relates to data transmission of differing types of frames (i.e., LARQ and non-LARQ frames) within the same network (e.g., Ethernet). Mallory teaches that both LARQ and non-LARQ frames can coexist on an Ethernet network. Col. 8, ll. 59-67. A receiver can distinguish a LARQ frame from a non-LARQ frame. Each receiver adds (on sending) and strips (on reception) the FCS field in a frame. Id. at col. 6, l. 53 - col. 7, l. 8.

We thus have no objective teachings for, at least, stripping the LARQ header, recalculating the FCS for the stripped frame, and adding the recalculated FCS to the frame, as required by each of the independent claims (1, 5, and 9). The references, consistent with the statement of the rejection, may show that the operations could be performed if there were a reason from the prior art to do so.

Appellant has disclosed a reason for the instant invention at pages 2 and 3 of the specification. An Ethernet controller does not recognize or expect a LARQ header. The controller counts the bytes to a set byte location and attempts to match the bit pattern with the wake pattern. Since the LARQ header has added eight bytes to the

frame, the wake pattern is not at the expected location and the Ethernet controller does not wake up.

Gibson has been applied against the further limitations of claims 4 and 9-12 for its teaching of having Ethernet devices enter sleep mode in order to conserve power. (Answer at 7.) Perhaps more important, the examiner submits (Answer at 15) that Gibson teaches determining if a bit pattern at a set byte location in a conventional Ethernet frame matches a wake pattern. Gibson's specific teaching, however, is that the wake-up data sequence comprises 16 consecutive repetitions of the destination address, which can be located anywhere within the frame data block 58. Gibson at 7, ll. 14-19; Fig. 2. For the type of device described by Gibson, it seems there would be no need for the system of independent claim 9. In an Ethernet network having LARQ frames, one would only need ensure that the wake-up data sequence is offset from the start of the frame data block by at least the number of bytes that comprise the LARQ header.

Appellant's specification at page 2 notes that wake patterns with respect to Ethernet controllers were known in the art. The specification does not, however, clearly state that the problem with respect to Ethernet controllers not waking due to LARQ headers in the Ethernet frame was known in the art.¹

¹ Appellant has a duty to disclose to the Office all information known to be material to patentability with respect to each pending claim.

For the foregoing reasons we cannot sustain either of the rejections on appeal.

CONCLUSION

The rejection of claims 1, 3, and 5-8 under 35 U.S.C. § 103 as being unpatentable over Hinchey and Mallory is reversed. The rejection of claims 4 and 9-12 under 35 U.S.C. § 103 as being unpatentable over Hinchey, Mallory, and Gibson is reversed.

REVERSED

Anita Pellman Gross

ANITA PELLMAN GROSS
Administrative Patent Judge


LANCE LEONARD BARRY
Administrative Patent Judge

~~LANCE LEONARD BARRY~~
~~Administrative Patent Judge~~

Howard B. Blankenship

HOWARD B. BLANKENSHIP
Administrative Patent Judge

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